UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK
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LUISA JANSSEN HARGER DA SILVA,

Plaintiff,

- against -

NEW YORK CITY TRANSIT AUTHORITY, METROPOLITAN TRANSPORTATION AUTHORITY, and RAQIA SHABAZZ,

Defendants.
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DECLARATION

17-cv-04550 (FB)(VMS)

Ahmad (Tony) Abdallah declares pursuant to 28 U.S.C. § 1746:

1. I submit this declaration in support of defendants New York City Transit Authority ("NYCTA" or "NYCT"), Metropolitan Transportation Authority ("MTA"), and Raqia Shabazz's motion for summary judgment.

2. My statements herein are based on my personal recollection, work experience, and review of documents and materials exchanged in this action.

3. This declaration will address MTA/NYCTA's efforts regarding customer safety in the subway system and specifically while on station platforms.

A. Education, Qualifications, and MTA/NYCT Background

4. I received a Bachelor of Arts degree from Queens College in 1986 and a Master of Science degree in Transportation Management from New York University-Polytechnic in 2005. I am currently employed by MTA/NYCTA as the Chief Officer in its Field Operations Services unit, a title I also held from 2017-2021. My responsibilities include oversight of Service Delivery's operating and capital budget development and compliance, facilities management, safety, platform controllers & dwell management, as well as contract review functions. From 2021 to 2023, I was

Acting Vice President and Chief Officer, Station Environment and Operations and my responsibilities included working with MTA Construction & Design for future station overhauls. From 2015-2017 I was the Chief Officer, Rail Control Center (RCC) and Support Division, and was responsible for the day-to-day operation of train movement, among other things. During this time, I was the Chief liaison with NYCT personnel and various external agencies on security-related issues and special events affecting subway service. From 2013 to 2015, I was the Chief Officer, Rail Operations Support & Development, and was in charge of building operations and security of the RCC as well as reviewing overall system security. My responsibilities included oversight of a Communication Based Train Control (CBTC) implementation project and a Public Announcement and Customer Information Signs project for subway-wide installation. I also oversaw all new projects such as New Technology cars (R142 through R160), Platform Screen Doors, and Track Intrusion Systems, and Help Points. From 2011 to 2013, I was Assistant Chief, Operations Support, Rail Control Center, and was responsible for directing all support functions and activities for rail operations. From 2006 to 2011, I was Senior Director, Operations Support, Rail Control Center, and was responsible for the overall daily administration of all security emergency activities related to the RCC. Prior to that, I held various other positions, such as Director for Technical Standards & Procedures, Superintendent F-Line, and Train Dispatcher and Train Service Supervisor from 1996 to 2006.

5. In addition to the above, I have also chaired various working groups and served as subways representative on the Rules and Standards Committee and American Public Transportation Association (APTA)[1] Rules and Standards Procedures Development Committee. I have been a member of various working groups including the Platform Screen Door Task Force.

[1] APTA is a is a nonprofit group that promotes and advocates for the interests of the public transportation industry in the United States.

6. During my almost 30-year career in various managerial positions at NYCT, I have become familiar with the history, purpose, and function of the MTA-NYCTA and its role in providing public rapid train transit within the City of New York. To achieve its goals, MTA-NYCTA employs thousands of professionals who operate, manage, and maintain over 6000 train cars on 25 lines through 472 elevated and subterranean stations on over 720 miles of track. Prior to the Covid-19 pandemic, the daily weekday subway ridership averaged 5.5 million rides and approximately 1.7 billion annual rides. Daily trains totaled over 8,000 trips with over 1 million individual door panel openings/closings.

7. I am aware that the first subway opened in New York City in 1904. Different methods were used to construct the stations, consistent with building codes and customs and practice at the time. I am also aware that the Interborough Rapid Transit Company (IRT) and Brooklyn-Manhattan Transit Company (BMT) operated their respective lines with different train equipment. In the mid-1900s, the operations of the IRT and BMT were consolidated with the City owned and operated Independent Subway System (IND) and eventually came under the authority of New York City Transit. Due to the different car classes, the old IRT lines (the number trains) were placed in the A division and the BMT /IND lines (the letter trains) were placed in the B division. To this day, A division cars cannot operate on B division tracks and vice versa.

8. Through it all, there was one constant - the safe operation of its equipment and the safety of its customers is a top priority for MTA-NYCT, which has consistently worked to meet these priorities within its capital resources and infrastructure capabilities.

9. In my positions at the MTA-NYCT, I have gained personal knowledge of NYCT's efforts to improve passenger safety and specifically to reduce customer accident events ("Collisions with Individual" or "CWI"), including:

a. safety systems NYCTA has considered to reduce (or eliminate) customer access to the railroad tracks via a physical barrier between the platform and the roadbed (e.g., Platform Screen Doors), including the various challenges in determining whether (and where) to install such systems (where installation is even feasible);

b. safety systems NYCTA has considered and tested to alert NYCTA employees, including train operators, that someone has accessed the roadbed (e.g., Track Intrusion Detection System(s)); and

c. other strategies NYCT has implemented to warn and/or discourage customers from standing too close to the platform edge (or intentionally accessing the roadbed) (*e.g.*, public address system announcements).

10. I also have knowledge of mass transit systems around the world that have installed either Platform Screen Doors or Track Intrusion technology. I have gained this knowledge based on, among other things, NYCT's membership in the Community of Metros ("CoMet"), along with international trips to cities that have researched, funded, installed, and maintained those systems.

B. The NYCT's Consideration and Evaluation of Platform Barrier Systems

11. NYCT has been researching, evaluating, re-evaluating, and considering the installation of platform barriers in its system for over twenty years. However, as will be further discussed, platform barriers are not "plug and play." They cannot be simply placed on a station platform and seamlessly work within the system. Consideration must be given to various conditions, such as station design, platform integrity, electrical power, signals, car equipment, air circulation, train operation, emergency situations, operating rules, accessibility, installation, maintenance and, of course, funding. While some of these issues are system wide, others vary by station.

12. It is important to note that while I have obtained knowledge of platform barriers being used in rapid transit systems outside of the United States, most of those systems were originally built with platform barriers or initially designed with the intent of installing platform

barriers at a later date. Domestically, I am unaware of any rapid transit system in the United States that has installed platform barriers in newly constructed lines to or added platform barriers to pre-existing systems, and I am also unaware of any federal, state, or local regulation that requires their use.

13. As background, there are several different types of platform barriers designed to prevent, reduce, or discourage passenger access to the track bed. First, there are "full height" barriers that span the entire height between the platform and the station's ceiling. This barrier-type is generally known as Platform Screen Doors (PSDs). Second, there are "¾ height" barriers that attach to the platform and - - as the name implies - - rises three quarters of the distance from the platform and the station's ceiling. This barrier-type is generally referred to as Platform Edge Doors ("PEDs"). Third, are "½ height" barriers that are attached to the platform and - - also as the name implies - - span half the height from the platform and the ceiling. This barrier-type is generally referred to as Platform Edge Gates ("PEGs"). Each barrier offers different benefits for safety, operation, and system environment.

14. NYCT has been evaluating platform barriers since the 1990's on its own initiative and in response to unsolicited inquiries. Various documents attest to the considerable efforts and considerations involved in this task. While it would be impossible to highlight every document, email, communication, note, discussion, presentation, study, and meeting involving PSDs and track intrusion devices for the past 20 years that has consumed thousands of manhours for NYCT employees and contractors, below is a brief timeline of NYCT's activities regarding their endeavors. While the product of these endeavors may have been a letter, a presentation, or a report, the manner in which the results were achieved was significant and, in some cases, *e.g.*, the System Wide Feasibility Study, took years to complete.

15. PSDs have been discussed as early as 1999. At that time, Charles Yongue (then acting Director of Engineering & Fire Protection, System Safety) prepared a memo to John Gaul, the then-Acting Chief Transportation Officer, System A, that provided comments from the NYCT's Office of System Safety ("OSS") "pertaining to the installation of platform edge guard rail/fencing [PEGs] in Transit stations." (Ex. D.)[2] OSS raised three general concerns about the installation of PEGs. First, OSS was concerned about emergency situations. For example, if a train lost power (or otherwise became disabled) while entering a station *but* the train was not properly berthed (*e.g.*, the doors of the train were not aligned with the PSDs), *then* passengers would be unable to exit the train. Second, OSS was concerned with platform crowding. Specifically, OSS was concerned that PEGs would "further reduce effective platform width" and - - assuming the PEG *did not* have some form of gate at the openings for passengers to enter/exit the trains - - pushing incidents and/or suicides would persist. *Id.* Third, OSS raised customer safety concerns. Specifically, that the ***severity*** of drag incidents could increase. *Id.* These concerns continue today for many stations.

16. Over the years, NYCT has received unsolicited suggestions regarding platform safety. For example, from 1999 to 2012, private citizen Roy Spence (the self-proclaimed inventor of the "Railway Gate") sent numerous letters about his barrier system to several public officials, including then New York Governor George Pataki. (Ex. E.)

17. In one response, Cheryl Kennedy (then-Vice President of OSS) advised: "[a]s you are aware, your proposal has been reviewed on several occasions by cognizant Transit Authority Departments. The results of these reviews were that installation of your device on the existing platforms of the [Transit] system would not be feasible" based on concerns OSS previously raised.

[2] All exhibits referenced herein are from the Declaration of Andrew P. Keaveney in Support of the Motion.

(Ex. F.)

18. In another response, Katherine Lapp (then-Executive Director and Chief Operating Officer) advised:

> ***Numerous proposals to install some type of platform barrier*** to enhance safety in the subways have been received from a variety of sources ***over the past 15 to 20 years. In each instance, the proposals were intensively studied to determine their applicability, practicality, feasibility, and reliability. We have found that the installation of such devices was not feasible*** due to available platform space, variations in subway car door placement and the fact that many of the proposed solutions had the potential to create other serious hazards. For these reasons, [Transit] has been aggressively adopting other methodologies to enhance platform safety in the subway system.

(Ex. G [emphasis added].) Ms. Lapp also noted that "system reliability is extremely important. Any failure of the gates to raise or lower completely as a train enters or leaves a station would be unacceptable at any time." *Id.*

19. Director Lapp's point about system reliability is of particular importance. The failure of any gate or barrier to open or close completely would render the relevant platform inaccessible, stranding waiting passengers on the platform and preventing any passengers from leaving the train at that planned station stop. (*Id.*)

20. Another private individual suggested NYCT install a "safety rail ladder" on the track side of the platform. *See* Ex. H. This concept would, in theory, allow customers who ended up on the track bed to climb back onto the platform. NYCT decided not to pursue it because of various concerns, including building code requirements for ladders, structural issues, and, most importantly, that they could encourage passengers who drop an item onto the roadbed to retrieve it themselves. *Id.*

21. In an April 5, 2007 letter, MTA Capital Construction (the predecessor to MTA Construction and Development) requested that engineering firm DMJM+Harris ("DMJM")

examine the feasibility of incorporating platform edge doors (PEDs) into the design of Phase 1 of the Second Avenue Subway Project. A true and accurate copy of that feasibility study is attached as Ex. I.

22. In the report, DMJM advised:

> [PEDs] are a relatively recent development in the long history of subway systems. While there is an extensive PED experience in Europe and Asia, ***there is no experience in North America with their use in heavy rail mass transit systems***. The systems installed to date have been people movers at airports and the like. The most recent installation, the AirTrain serving Kennedy Airport, is a more substantial system approaching heavy commuter rail in its capability.
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> * * *
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> To incorporate PEDs into the Second Avenue Subway Project at this state will have major impacts on the design and schedule. In addition there will be impacts on operations and maintenance.

Id. (emphasis added).

23. According to the report, DMJM identified several advantages to PSDs, including: (a) the protection they provide to passengers from passing trains; (b) that they create a fire and safety barrier between the platform and the track; and (c) they prevent trash from falling (or being thrown) onto the track. DMJM also identified disadvantages, including: (i) a potential increase in claims resulting from passengers being struck or caught in the doors; (ii) operating and maintenance costs; and (iii) their susceptibility to vandalism. (*Id.* at Section 3.2).

24. There were also concerns with retrofitting the current Second Avenue designs plans to incorporate PSDs. It was determined that significant design changes would be required to the smoke extraction system along with structural and lighting design. In addition, rolling stock would have to be uniformed to provide proper alignment with train doors and PEDs. Station maintenance operations would be affected since current plans had maintenance activities conducted from track side. Signaling equipment would have to be moved and operating procedures relating to those changes would have to be implemented at those stations due to PED obstructions. Rolling stock

would have to be redesigned and reshaped so as to avoid contact with the PSDs and to maintain the required dynamic envelope of the train. These changes would impact the final design date and the revenue date. As such, the decision was made not to include PSDs in the project.

25. Regardless, consideration and investigation of PSD continued in other ways. For example, on June 25, 2007, NYCT personnel met with representatives from the Paris Metro (Régie Autonome des Transports Parisiens or "RATP") to discuss PSDs. *See* Ex. J.

26. The RATP's presentation included "challenges of retrofitting existing lines with platform screen doors." There was also open discussion in the afternoon, which included: (a) the importance of increased passenger safety; (b) security benefits; (c) operational issues (e.g., whether PSDs could accommodate different car lengths, and the impact on platform capacity); (d) technical issues (*e.g.*, integrating PSD operation with signal and car systems); and (e) maintenance issues (*e.g.*, preventive maintenance requirements and expected useful life). (*Id.*)

27. All of these issues were, and continue to be, important to NYCT's evaluation of PSDs feasibility in Transit's system.

28. In October 2009, the Metropolitan Railways Committee ("MRC") of the International Association of Public Transport ("UTIP") issued a Final Report on Platform/Track Protection Systems. (Ex. K.) Transit employees, including myself, reviewed the Final Report when it was issued.

29. According to the Final Report, MRC's purpose was "to understand the practice of various metro networks in deploying devices for platform/protection, as well as the technical, operational and financial considerations of such deployment." (*Id.*) The MRC based its findings on surveys that were sent to twenty-two UTIP members and affiliates; MRC received twelve responses, including a response from the NYCT. In fact, the NYCT provided the *only* response

from North America.

30. In addition, the MRC report noted that *only seven respondents* (58%) deployed platform protection systems, including either full-height or half-height platform doors. The Final Report also noted that Singapore was a "pioneer" of PSDs (first installing them in 1986) and Hong Kong had the "largest installation with PSDs deployed on all of its 7 lines." Nevertheless, the MRC found that: "PSDs are deployed selectively taking into consideration specific needs and economic factors. *Even for lines that are equipped with PSDs, [they] are not necessarily installed at all stations, as there may not be sufficient cost and benefit justifications or available funds.*" *Id.*

31. Notably, the MRC report revealed that most PSDs are installed on new lines or extensions. Indeed, as of 2009, ten of the fourteen lines equipped with PSDs were newly constructed lines or extensions. In other words, "[e]xperience in retrofitting is relatively rare." *Id.*

32. MRC reported that Hong Kong's MTR (whose first train section was completed in 1979) was the first railway *in the world* to try to retrofit PSDs on an already built and operating railway system. The project involved thirty air-conditioned underground stations (with seventy-four platforms in total). The primary purpose for Hong Kong's retrofit was not safety related. Rather, it was done "to improve air-conditioning performance to meet passenger expectations by reducing peak hour temperatures . . ." (Ex. K, Annex "B".) The MRC reported achieving this goal and found an overall energy savings of 15%. Notably:

> Apart from being the first of its kind, the project implementation span[ed] over a period of 6 years. During this period there [were] many essential station improvements, commercial initiatives and capital works items which would affect or be affected by the Retrofit PSD project. The retrofit PSD project itself also require[d] modifications or new interfaces to a number of system-wide control systems such as signaling, central ECS control, station management system and so on. The interfaces with all these works on program, design and operational must be managed carefully and proactively to minimize delay, cost overrun and service disruption.

33. The Final Report also advised PSDs pose potential dangers of their own. For example, the report details an incident that occurred in Shanghai on July 15, 2007, during which a passenger was trapped between the train and a PSD and was killed when the train started to leave the station. (Ex. K, Annex C.)

34. In late 2009, NYCT received another unsolicited proposal from a joint venture between Boston Sovereign Bank and the Seoul Metropolitan Rapid Transit Corporation Authority (SMRT) for the installation of PSDs at no cost to NYCT or the MTA. The joint venture sought to provide PSD arrays at 30 stations - - *to be selected by the joint venture* - - under a 30-year build-operate-transfer (BOT) agreement. The joint venture claimed that they could recover their costs from revenue from advertisements on the PSDs themselves. *See* Ex. L.

35. It was immediately apparent that the joint venture's plan lacked any significant detail. Nevertheless, "NYCT senior management was interested in reviewing the concept of retrofitting stations with PSD arrays, with the potential goal of retrofitting existing subway stations with PSD arrays if the initial installation proved successful." *Id.*

36. Therefore, NYCT explored the joint venture's proposal and even sent a group of representatives, including myself, to Seoul, Korea in January 2010 to research and evaluate SMRT's PSD system. *See* Ex. "M" at p. 2. The trip, which occurred from January 23 through January 28, 2010 included inspection(s) of: (a) the platform doors at a number of SMRT stations; (b) a PSD manufacturing facility; and (c) the PSD component manufacturing facility. *Id.*

37. We found that SMRT's "doors were demonstrated to be a reliable, effective method for providing separation between passengers and the right-of-way." *Id.* at p. 1. Indeed, the doors were initially installed to prevent suicides on the system; this goal was met. The doors were also effective in "prevent[ing] anyone from getting to the tracks whether it is as a result of accidental

fall, intentional pushing, criminal intent, vandalism, security compromise, or homeless refuge." *Id.* at 2.

38. On the other hand, the trip did raise some concerns. Preliminarily, there are differences between the systems of Transit and Seoul that would need to be researched and addressed. For example, we were concerned about airflow in Transit's system. Specifically, NYCT's stations are primarily cooled through the piston-action of trains traveling through the tunnels (which creates a burst of air in the stations). Therefore, we recommended that - - if doors were installed in NYCT's system - - that they be of the PED type to allow for airflow above the doors. Otherwise, dedicated HVAC systems would be required *as well as* ventilation of the tunnels to reduce the risk of pressurizing the tunnels. *Id.* at pp. 2, 7. We also identified that routine maintenance needed to be researched. This was particularly important because SMRT only offered a three-year warranty on the doors. *Id.*

39. We were also concerned that the team proposing the untested BOT model (SMRT, Boston Sovereign Capital, and TIS, Inc.) had *no experience* with such a model in the United States. And, most troubling, was the fact that SMRT - - who had entered into a BOT agreement when it installed PSDs on its system - - canceled the agreement after one year and took over the process itself. *Id.* at 3.

40. In another memo I authored, I also noted potential issues with precision stopping and the need for CBTC operation, which at that time was only on the L line. (Ex. "N".) Uniform train door openings, which Seoul had, also did not exist on NYCT equipment. (*Id*). Seoul outdoor stations were all covered by overhangs, which prevented snow and ice buildup on the PSD threshold (that are mounted flush with platforms) that could obstruct door openings. (*Id*) Most NYCT outdoor platforms are not completely covered by overhangs.

41. We also observed a cultural difference between customers in Seoul and New York. Specifically, Seoul riders strictly adhere to markings regarding door openings that are often ignored in NYCT, and which can delay embarking and disembarking trains in a timely manner. (*Id* at 3.)

42. Finally, operating procedures would need to be changed, which would require union negotiations regarding train operators' and conductors' duties. (*Id.* at 5.)

43. In July 2010, SMRT indicated the 16 Manhattan stations in the A-Division that it "cherry-picked" for PSDs based on "heavy ridership, affluent neighborhood characteristics and business district locations." (*See* Ex. "L" at 6.) Out of the 58 station platforms identified, only four platforms – the two platforms on the 7-line at Grand Central and the two platforms on the 6-line at Lexington Avenue/51st Street - were subsequently deemed feasible for PSDs. (*See infra* at ¶ 82.)

44. Following the Seoul trip, NYCT created the Platform Screen Door (PSD) Task Force, of which I was a member.

45. The PSD Task Force held its kickoff meeting on November 3, 2010. (Ex. O.) To internally research the matter further and to foster competition so as to comply with State procurement requirements, we decided on a dual course of action. *Id.* First, we prepared and sent a Request for Information (RFI) "to the transit supply industry to find out the technical and financial capabilities of platform door/gate builders, in a more formal way . . . ." *Id.* Second, we developed a Concept of Operations (ConOps) to "define operating system requirements and lead to development of spec[ifications]." *Id.*

46. The PSD task force also discussed the cost and maintenance of PSDs. As noted:

> [T]here was a fair amount of talk about financial risk (for instance, the "no-cost" Seoul proposal was essentially a low-ball estimate that did not take into account all of the costs that NYCT might have (car retrofits, maintenance costs, power upgrades, etc.).
>
> *Id.*

47. In addition, we discussed how to retrofit pre-existing stations for PSDs. The only retrofit of a "legacy" system that we were aware of was done at certain select stations in the Paris Metro and not systemwide. Therefore, we decided to again reach out to learn more about their retrofit experience. *Id.*

48. In December 2010, NYCT sent out its RFI (known as #10RFIN44) "to identify and obtain information from firms experienced in designing, furnishing and installing [platform barrier] system[s] to enhance passenger safety, comfort and the overall station appearance." (Ex. P.) At a minimum, all responses needed to include minimal maintenance and repair, minimal on-site assembly, emergency/maintenance access, component reliability, displays/space for advertising and/or information, integration with existing infrastructure (incl. CCTV) and full compatibility with wayside signaling and communication systems. *Id.*

49. Because of Boston Sovereign Bank/SMRT's initial proposal, NYCT also sought responses regarding "cost-sharing financing options for a potential [platform barrier system] retrofit." *Id.* Indeed, NYCT's desire to try to defray costs was due to: (a) the anticipated high installation and maintenance costs associated with platform barriers; and (b) NYCT's goal to be cost-efficient.

50. The cost concerns involved with PSDs, in light of other needed projects, were soon amplified by members of the NYS Legislature. For example, in a letter dated February 2, 2011 to then MTA Chairman Jay Walder, State Senator Diane J. Savino suggested that PEDs would "not win the [her] support for funding if they are achieved at a high cost to NYCT." (Ex. Q.) According

to her letter, she wrote:

> While I can certainly understand the desire to prevent track fires, death and injury in our transit system, I fail to see how this is a good use of the MTA's extremely limited resources. Life is precious, track fires are dangerous, but the risks of both are far too minuscule to justify the expense and effort, especially when most South Brooklynites and [Staten] Islanders have had their mode of commuting eliminated under the auspices of fiscal restraint.

51. In preparing a response to Senator Savino, John H. Johnson, then Chief Transportation Officer, Rapid Transit Operation, noted that "[i]n the past, NYCT has explored PEDs in some subway stations but had to postpone the realization due to various reasons and the main one being cost." (Ex. R.)

52. In early August 2011, NYCT developed its Concept of Operations ("ConOps") for PSDs/PEDs/PEGs. (Ex. S.)

53. The purpose of the ConOps was to "identify the stakeholder needs for platform doors and to define operating scenarios that will be used to develop the high-level requirements." *Id.* at p. 2. The study defined "stakeholders" means Transit "Departments and Divisions that will manage the platforms doors," *and* external entities "such as the NYPD and FDNY, that may need to interact with the platform doors." *Id.* at p. 4. The ConOps identified the following goals for "the platform door system": (a) improve customer safety; (b) reduce trash from accumulating on the track; (c) reduce track fires due to trash and debris; (d) deter unauthorized individuals and would be criminals (terrorist acts, vandalism) from accessing tracks; and (e) improve safety of those working on platforms while reducing requirements for flagging protections. *Id.* at p. 15.

54. The ConOps also discussed the impact of PSDs on: car classes; ADA issues; maintenance; landmark architectural issues; and operating procedures (*Id.*) The need to retrofit all existing cars and the effect on stations' airflow was addressed (*Id.*). Finally, it was noted that any PSD to be installed and tested as a prototype (*Id*).

55. On August 24, 2011, the PSD Task Force met to evaluate the responses to #10RFIN44. (Ex. T.) In total, we received twelve submissions, some which came from respondents with no PSD experience (these were eliminated from consideration almost immediately). *Id.* Other submissions focused on the companies themselves and developing a relationship with NYCT rather than addressing PSDs. In other words, they were not responsive to the RFI and were eliminated from consideration. *Id.*

56. The PSD Task Force met again on September 12 and October 4, 2011 to evaluate the remaining submissions. Ultimately, the Task Force found that four respondents provided "acceptable responses," and recommended that they be included in future discussions relating to the PSD project. *Id.* p. 2.

57. Following this meeting, Tom Prendergast (then-President of NYCT) authored a Memo dated December 12, 2011, to Dr. Michael Horodniceanu (then-President of MTA Capital Construction) suggesting a pilot for PSD where door systems could be tested that would include developing "a set of design standards, as [platform barrier] systems are envisioned to ultimately be installed in NYCT stations." (Ex. U.)

58. Regarding the location of a pilot program, NYCT considered locations on the 7-line specifically the then under construction 34th Street and 11th Avenue station, now known as 34th Street-Hudson Yards. *Id.* This station could be developed in one of two ways: (1) designed *with* PSDs to begin shortly after operation; and (2) designed to be PSD-ready, with installation occurring when there is, for example, a single train fleet on the line. *Id.* Regarding the latter, Transit anticipated that a single fleet would be operating on the 7-line in 2016. *See id.* at p. 5.

59. The 7-line extension project to Hudson Yards was funded by the City of New York through the Hudson Yards Development Corporation (HYDC) and managed by MTA Capital

Construction. Construction started in 2008 and reached substantial completion by December 2013. As such, deadlines and funding became an immediate issue. Funding was discussed if NYCT adapted "a new standard for platform door/gates" systemwide. NYCT was not prepared to adopt such a standard based on its proposed pilot program, which would take an additional lengthy and extensive process, but would "continue to support the [PSD] effort in any way feasible." (*Id.*)

60. Although funding was not provided for the proposed 34th Street-Hudson Yard pilot, President Prendergast, along with the rest of MTA/NYCT senior leadership, remained committed to platform safety.

61. NYCT continued to pursue other devices to address platform safety. As President Prendergast noted in a July 26, 2012 letter to New York State Senator John Avella:

> [NYCT] use[s] a variety of public safety announcements, posters, signs and other visual reminders, both on-board and in stations, to remind customers waiting for the train to stand back from the platform edge behind the yellow protective warning strip and comply with all visual and audio safety messages. The Public Address and Customer Information Screens (digital message boards that alert customers to train arrival information) currently in use at some stations and to be installed in all stations will eventually render unnecessary the dangerous customer practice of leaning over the platform edge to look down the tunnel for approaching trains. Our messages also remind customers of the hazards of descending to the tracks to retrieve dropped items and urge them to instead notify a police officer, station agent or other MTA employee for assistance in safely retrieving personal property from the tracks.
>
> (Ex. V.)

62. While platform barriers would likely eliminate/diminish CWI events on platforms where their installation is feasible, there are some hazards that are not initially apparent. *See, e.g.*, *supra* ¶¶ 15, 18 and 24.

63. As President Prendergast explained in January 2013:

> The hazard analysis for platform safety is one in which there are far more hazards than one might realize. The obvious one like suicides and pushes can be easily

> overshadowed by the less apparent ones like customer trappings and inadvertent dragging of customers. The fact that rail transit existed for over 80 years before the technology was available to come up with a viable platform door is an indicator of how complicated the solutions are. Also, the fact that there are extremely few system retrofits of such doors (only two or three systems worldwide) further reinforces that fact.
>
> (Ex. W.)

64. On February 7, 2013, they presented their Customer Contact with Train Incident Report to the New York City Council's Transportation Committee. (Ex. X.) In its presentation, MTA outlined some of the causes for platform/train accidents, such: tripping/falling onto tracks or into moving trains, suicides, intentionally entering track area, being pushed or bumped onto tracks or into moving train, medical condition, fall between cars, and drug/alcohol impairment. (Ex. Y.) To address this, MTA/NYCT pursued several mitigations strategies, such as an awareness campaign and technological solutions. (*Id.*). The awareness campaign focused on enhanced station and train announcements, along with safety information printed in multiple languages on station and train posters, MetroCards, brochures, and employee lapel buttons. (*Id.*) Safety information was also displayed on MetroCard vending machines and other digital platforms. (*Id.*). Regarding technology, Help Point kiosks were being tested in stations to provide emergency assistance. (*Id.*). The Committee was advised of efforts regarding its investigations of the use of PSDs and TIDs. (*Id.*).

65. Further, the New York City Council's Transportation Committee was made aware of the challenges/impediments of installing PSDs, such as curved and narrow platforms, the need for platform edge reinforcement and electrical upgrades, ADA issues, Landmark/historical station issues, train door alignment, and signal upgrade/retrofit (*Id.*). Finally, the Committee was advised of cost concerns and that the MTA/NYCT already had other capital program needs for upgrade, maintenance, and maintaining a state of good repair, such as $15 billion for modernization of the

signaling system, $4+ billion for emergency ventilation, $5+ billion for station component program, $2.5 billion for Help Points, CCTV, and other safety related information systems, and $15 billion for subway car and bus investments. (*Id.*)

66. Regardless of these challenges, in October 2014, NYCT retained engineering firm STV, Inc. ("STV") to design a pilot installation of barrier technology at 14th Street/6th Avenue on the Canarsie L-line. *See* Ex. "Z", at p. 2. Based on STV's recommendations, 3rd Avenue was selected for the pilot because it was "free from obstructions and the APGs would be compliant with ADA and NYS Building Code." *Id.* The L line also had CBTC, which would assist with precision stopping when berthing trains, so the train doors and PSD arrays would operate in tandem. A kick-off meeting for the PSD Pilot Project for the proposed PSD installation at 14th Street/6th Avenue on the Canarsie L-line occurred on August 17, 2014. *See* Ex. AA.

67. In mid-2015, discussions were held about developing a proof-of-concept test on non-revenue track. This would enable NYCT to test the proposed system by multiple vendors before moving the pilot to revenue track. Pelham Parkway station was designated for this purpose.

68. On June 5, 2016, five Transit managers, including myself, and STV representatives traveled to London and Paris to "conduct industry best-practice research regarding [PSD] systems in metro rail systems" comparable to that of NYCT. STV representatives continued on to Shanghai and Seoul to further investigate their systems. The team met with multiple platform barrier manufacturers, including: (1) Faiveley (France); (2) Gilgen (Switzerland); (3) JCI (China); (4) NRT (South Korea); and (5) Westinghouse (England).

69. Following that trip, STV, in collaboration with NYCT, generated a the "Platform Screen Doors International Research Report." Ex. BB. The report states, in pertinent part:

> The purpose of the research trip was to educate the key project team members from both NYC Transit and STV of the manufacturers, products, technologies, control, safety systems, operations, implications of retrofit stations, interface with vehicle systems and the user experience in locations where the knowledge gain would most benefit the NYC subway system's potential future installation of platform screen doors and/or automatic platform gates.
>
> * * *
>
> The report will inform the design of this pilot test project to be installed as well as the Feasibility Report of the Canarsie and/or Flushing Lines and the updating of the NYC Transit generated Concept of Operations (ConOps) document which are included in STV's scope of work.
>
> This project will seek to determine the challenges of design, construction and interoperability of the [barrier] systems with the NYC Transit station environment, operating and test them against the standard operating procedures of the station and identify increases or decreases in overall customer and employee safety.

Id. at p. 7.

70. The team found that PSDs would eliminate suicides because the assembly reaches the ceiling. Platform gates, on the other hand, would eliminate people being pushed onto the tracks and *may* reduce suicides (because it is possible for someone to climb over the gate to reach the tracks). *Id.* at p. 4.

71. Nevertheless, the report found "installing [either] system into the [NYC subway] system, at the then 110 years old system, presents unique challenges to the existing infrastructure and will touch every division of the Department of Subways." *Id.* at p. 44. Further, "[e]ach existing station will require a full design evaluation beyond the feasibility study phase . . . to determine what type of system, if any, is appropriate for the conditions encountered." *Id.* Moreover, ideally each line would have a uniform system given the "complexity of maintaining multiple systems" and consist (*e.g.*, trains) would ideally be uniform (also known as a "single fleet"). *Id.*

72. One example of a challenge NYCT faces involves what is referred to as "minimum distances." In short, during our interviews in Europe we learned that the distance between the barrier system and the door of the train should be ideally *less than* 20 cm (7.8 inches). Where this "minimum distance" is exceeded, passengers can become inadvertently trapped between the platform barrier and the train. NYCT's limiting line of line equipment generally exceeds this distance to account for the train's oscillation. (*See* Exhibit JJ, Appendix A, pg. 14 of 28.)

73. Additionally, a fixed barrier on the platform edge could pose hazards to train conductors. Specifically, RTO requires conductors to stick their heads out of the window for the first seventy-five feet of travel after a station stop. Obviously, this rule could be tweaked at stations equipped with platform barriers. But the habit of doing so at stations that are not so equipped - - which would be the overwhelming majority of stations - - would be fatal to any conductor who accidentally reverted to the policy in a station with platform barriers installed. (*See* Exhibit CC.)

74. In August 2016, Transit decided to defer its proof-of-concept pilot program that was planned for Pelham Parkway. (Ex. DD.) The decision was made because Pelham Parkway was chosen as an ESI (Enhanced Station Initiative)[3] station and installation of platform barriers would detract from that goal. Due to this development, CPM-Systems recommended that STV's task order be recast as a strategic system-wide study aimed at evaluating the feasibility of platform barriers at each station (and make a recommendation as to the type of barrier to install at each station, where feasible).

75. A system-wide study was necessary because each station in Transit's system presents unique challenges for the installation of platform barriers. For example, some stations

[3] This program, initiated by a mandate by then Governor Cuomo, was launched in 2016 with the goal of modernizing up to 33 stations consisting of new lighting, renewed finishing, signage, enhanced communications, and necessary structural repairs.

have curved tracks, some have columns close to the platform edge, and others have platforms that are unable to support the infrastructure needed to support the weight of the doors and motors.

76. In March 2017, STV began its study of all 472 NYCT stations on a line-by-line, platform-by-platform basis to determine the feasibility of installing one of the various types of platform barriers. *See* Ex. Z, at p. 2.

77. On May 10, 2017, NYCT and STV personnel met to discuss different types of barriers, including rope barriers, PSDs and PEGs. (See Ex. Z). It also discussed platform barriers in connection with ADA (Americans with Disability Act) code compliance. Preliminarily, one concern was whether PSDs could prevent a station from becoming ADA compliant *or* make an existing ADA-compliant station non-compliant. Part of the concerns is that PSDs would decrease the width of platform space available to pedestrians - - including the area on each side of a staircase - - thus restricting pedestrian flow, which can lead to overcrowded platforms and create hazardous conditions.

78. Because new technology was being considered for integration into the existing subway system, on August 14, 2017, OSS issued a preliminary hazard analysis in accordance with Military Standard 882E on the proposal to install full height and half height platform edge doors on station platforms. According to the analysis, OSS identified several potential hazards with PEDs, identified and assessed the probability of the hazards, and recommended that (a) they are not installed or, (b) if they were installed, that several precautions and steps be taken to minimize the risk. (See Ex. EE.) One of the recommendations was to implement a customer awareness campaign that advises customers of the hazards associated with PEDs. (*Id*).

79. In April, 2018, STV issued a technology assessment of "roped" barrier systems in Transit's system. (See Ex. FF). STV identified several benefits of roped systems, including: they

have no impact on air movement/ventilation; they can accommodate consist of different length and with different door configurations; and the electrical load is lower than PSDs and PEGs. However, STV also identified several severe disadvantages to installing roped barriers, including: the likelihood of fingers or hands getting caught by the roped tiers as they open; the temptation for climbing or swinging on the barrier; and they do not eliminate the possibility of passengers dropping or throwing debris onto the tracks. After considering the advantages and disadvantages to this barrier-type, STV recommended that roped barriers *not* be explored further. *See* Ex. FF, at pp. 2-3.

80. On April 5, 2018, NYCT received the estimated cost of the pilot program at 3rd Avenue ("L" line) of approximately $27 million. (Ex. GG). The pilot program, however, was canceled on June 4, 2018, because funding that was previously earmarked for the project was needed for ADA accessibility work at 6th Avenue. *See* Ex. HH.

81. Despite the cancelation of the 3rd Avenue pilot program, the system-wide feasibility study continued into 2019 and the almost 4,000 pages of results were published in 2020. A chart was created by STV and sent and distributed to Transit employees, including myself, that details the number of stations at each line which could accommodate PSDs or PEGs across Transit's system. In other words, the chart provides a summary of STV's system-wide study. (Ex. II.)

82. STV found that out of 472 stations, PSDs or PEGs were feasible *at only* 128 stations (*e.g.*, 27% of the system). As previously noted, different car classes with different door alignments exist in both the A and B divisions. However, the feasibility study assumed homogenized car classes by 2033. Without this assumption, significantly more stations would have been deemed infeasible. The total cost to install platform barriers - - *at the 128 stations only* - - would cost approximately $7 billion ($7,000,000,000) with an additional annual maintenance cost of $119

million ($119,000,000). *Id.*[4]

83. For the B train line alone, PSDs were found feasible at *only* 16.2% of stations (6 of 37 stations). The cost to install PSDs at those six stations would total approximately $349 million to $447 million with an annual maintenance cost of approximately $5.6 million. *Id.*

84. I have been advised that plaintiff Luisa Harger Da Silva's accident occurred on August 2, 2016, when she was struck by a northbound B train at the Atlantic Ave. - Barclays Center station.

85. According to the STV study, platform barriers were not feasible for the B line platform at the Atlantic Avenue Barclay Center Station – where the accident occurred - for both APGs and PSDs as their implementation would result in non-compliant ADA conditions. Ex. JJ, at p. 8.

86. Unfortunately, this is not a unique outcome. As STV's February 2020 letter highlights:

> The [Transit] system features cars with different door alignment profiles . . . the car types are mixed among subway lines . . . the different spacing of doors on these cars makes installation of platform doors infeasible at most stations today.

Ex. Z, at p. 3.

87. The STV study found that 154 stations were infeasible due to ADA clearance issues. Separately, 100 stations were infeasible due to the structural integrity of the platform which is insufficient to support the weight of the barriers. The remaining were infeasible for other issues, including support columns being too close to the platform edge and lack of station space to house the necessary mechanical equipment. *Id* at pp. 3-4.

[4] The cost for installing PSDs at 128 stations would be almost 25% of MTA's five-year capital plan budget for 2020 to 2024 for NYCT subways. Https://new.mta.info/sites/default/files/2019-09/MTA%202020-2024%20Capital%20Program%20-%20Executive%20Summary.pdf, accessed 2023-10-31.

88. In my present role, I am not actively involved in NYCT's continued pursuit of PSD. However, I am aware that NYCT is currently soliciting bids to install PSD pilots at three stations: Times Square 7 train, Third Avenue (Brooklyn) L train, and Sutphin Boulevard-Archer Avenue (Queens) E train.

C. Additional Safety Initiatives to Improve Customer Safety

89. Transit has considered and pursued numerous platform safety initiatives to improve customer platform safety while also considering PSDs. For example, NYCT has: installed surveillance cameras at numerous platforms; installed tactile strips near the platform edge; yellow painted rubbing boards to demarcate the platform edge; installed service intercoms (known as "help points") on platforms to allow customers to alert operations staff about an emergency situation; installed countdown clocks to alert customers of arriving trains; implemented a public awareness campaign consisting of platform and on train announcement; and published warnings on station and train posters and the back of Metro-Cards advising customers to step-back from the edge. Examples of such posters are at Ex. KK.

90. This year, NYCT has initialed the Station Re-NEW-vation Program, that uses planned weekend shutdowns to "clean, scrub, scrape, paint, brighten, repair, retile, refurbish, renovate, and renew stations." Work also includes installing LED light fixtures, repairing HVAC systems, unclogging drains, securing platforms and stairs, and replacing outdated and damaged signs, painting, track work, ADA upgrades, fixing potential tripping hazards. Some stations also undergo minor construction, such as tile replacement and roof repairs. The subject Atlantic Avenue-Barclays Center station on the B/Q line has been part of this initiative.

91. NYCT has also considered and tested track intrusion technology (TIDs). These TID systems use sensors and cameras to detect unauthorized access to track area. Track intrusion

is an advance warning system and, based on my knowledge, currently ineffective when objects suddenly appear before a train with limited distance to stop. Tested systems, when detecting a hazard, would alert RTC of the potential condition, who would then alert the train operator to stop the train before entering the portion of track where the hazard is detected. There are, of course, several technological shortcomings with the system, such as "false positives" that detect objects that are not hazards to the train. However, this is an emerging technology and NYCT is further investigating its full potential.

92. In 2013, NYCT began preparing a ConOps for track intrusion detection systems to reduce the incidence of contact between trains and unauthorized individuals on the roadbed.

93. Later that year, NYCT senior managers, including myself, traveled to Europe to assess track intrusion detection systems with a goal of improving the safety of NYCT customers and reduce the number of incidents of people on the tracks being struck by subway trains. *See* Ex. LL. Our group traveled to Munich, Nuremburg, and Budapest to evaluate the reason for the considering the technology, "the selection process undertaken, the installation of the systems, the maintenance of the systems, and the performance of the systems." For example, in Budapest we learned that they decided not to install PSDs due to cost, lack of competition, potential maintenance issues, and the need to integrate the door control system with the cars and signaling system. The goal was to learn from challenges those systems faced and to avoid potential similar situations.

94. With lessons learned, NYCT began testing Track Intrusion technology in approximately September 2014 at the Rector Street station. Four systems were tested: Molinari, Honeywell, Telsys, and Site Logix. Ultimately, we found Molinari to be the "most accurate, reliable, scalable, responsive and user friendly." *See* Ex. MM. Subsequently, another test of Track Intrusion technology began in 2018 at West 50th Street station. *See* Ex. NN.

95. Transit issued a final report on the "Conclusions of the Track Intrusion Detection" on December 19, 2019. Ex. OO.

96. According to the report, during the first pilot (Rector Street) "there were eight hundred valid alarms with minimal false positives or nuisance alarms." *Id.* at p. 2. Similarly, during the second pilot (W. 50th Street) "there were numerous valid alarms with minimal false positives or nuisance alarms." *Id.* The costs of the pilots were $3.4 million and $6.1 million respectively. *Id.* at p. 3. It was estimated that the total approximate system-wide costs (at all 1,237 platforms across 472 stations) just for installation would be $3 billion ($3,000,000,000). *Id.* Accordingly, some of the "challenges to implementation" include "obtaining a source of capital funding" and "operating funds for staffing to maintain" and manage the systems. *Id.*

97. NYCT continues to look for new technology to increase customer safety. For example, it continues to look at the latest developments in track intrusion technology that can more accurately detect hazards. NYCT is continuing its customer awareness and suicide prevention campaigns and is partnering with mental health and social services outreach agencies to assist people with these issues inside the subway system. NYCT is also expanding its CCTV network for added security, installing blue lighting to induce a calming effect and to help prevent suicides, and assessing laser intrusion technology to detect unauthorized entry into the right of way, tunnels, or other restricted areas.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: November 6, 2023
New York, NY

Tony Abdallah